Drive^{IT} Low Voltage AC Drive
ACS 400V, Ventilation

Dedicated drive for HVAC applications

ACS 400V is a dedicated HVAC (heating, ventilation, air conditioning) drive. In a compact package it offers reliable control performance, First Environment EMC filtering and an easy to use text panel – everything that is required in standard HVAC applications. Commissioning is easier than ever; just set the motor parameters and the drive is ready to start. ACS 400V fulfils the requirements of several applications, thanks to the different operation modes with I/O hard wiring.

Belonging to the range of Drive^{IT} Low Voltage AC Drives, ACS 400V benefits from the ABB proven technology and reliability. A unique set of services is also included to ensure that the entire process from drive selection to world-wide support and warranty is as straightforward as possible for the user.

As a dedicated HVAC drive ACS 400V offers an easy way for saving energy in pump and fan motors. By replacing mechanical control with the ACS 400V a typical energy saving of 30-50% will be achieved.

Basic features

- Power range 3...37 kW (380-480 V)
- IP 21 or IP 54 protection class
- Clear text panel with selection of 12 languages (incl. Russia)
- First Environement (Class A) EMC filter
- Only motor data parameter settings required in commissioning
- Several operation modes for different applications with I/O hard wiring
- Modbus and RS 485 interface as standard, several other fieldbuses available as options

Benefits for the customer

- Tailored product for the HVAC applications with connection instructions and diagrams
- Easy to use while providing full functionality
- Minimizes installation and commissioning time
- No cabinets needed for electrical room installations; applies both for IP 21 and IP 54 units
- Gives good protection for motor and process
- Environmental aspects considered: energy saving eco-efficient product
- Reliable and proven ABB quality

ACS 400V Technical Data

Type code	Frame size	Nominal motor P_{NSQ} Squared torque kW	Input current I_{1NSQ} A	Cont. output current I_{2NSQ} A	110% I_{2NSQ} A	Over-current limit (peak) A	Line fuse A	Power losses Power circuit W	Power losses Control circuit W
ACS 401-V004-3-X	R1	3	6.2	6.6	7.3	20.3	10	90	6
ACS 401-V005-3-X	R1	4	8.3	8.8	9.7	27.5	10	120	6
ACS 401-V006-3-X	R1	5.5	11.1	11.6	12.8	37	16	170	6
ACS 401-V009-3-X	R2	7.5	14.8	15.3	16.8	48	16	230	6
ACS 401-V011-3-X	R2	11	21.5	23	25.3	64	25	330	6
ACS 401-V016-3-X	R3	15	29	30	33	76	35	450	6
ACS 401-V020-3-X	R3	18.5	35	38	42	99	50	560	6
ACS 401-V025-3-X	R4	22	41	44	48	125	50	660	6
ACS 401-V030-3-X	R4	30	56	59	65	145	60	900	6
ACS 401-V041-3-X	R4	37	68	72	79	195	80	1100	6

- Type code: Protection class is selected with the last digit (X in the table). Value 2 gives IP 21 (e.g. ACS 401-V004-3-2), value 5 gives IP 54 (e.g. ACS 401-V004-3-5).
- 110% I_{2NSQ} short term overload current is allowed for one minute every ten minutes.
- Drive ratings are the same regardless of the protection class.
- Line fuse type: For EU (non UL) installations IEC269 gG. For UL class CC or T.
- The maximum motor cable length is 100 meters for First Environment (Class A).
- ACS 400V has CE, UL, cUL and C-Tick markings for all types.

Complying with EMC requirements

ACS 400V units are equipped with an EMC filter for First Environment Restricted Distribution (Class A). The filter is built-in up to 11 kW units. Requirements concerning line current harmonics are also met.

Options

- Fieldbuses for all major building automation systems
- N2 available as embedded option
- I/O extension module
- All ACS 400 options fit to ACS 400V

A wide selection of technical and application material is available.

ABB

ABB is a global leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact.

AC Drives are used to control the speed and torque of a standard induction motor. The Low Voltage AC Drives have an excellent track record and there are already hundreds of thousands installed units.

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